CLAIMS

1. A non-invasive method for facilitating the diagnosis of a subject for a tissue remodelling-associated condition, comprising:

obtaining a urine sample from a subject; and

detecting an enzyme in the urine sample, thereby facilitating the diagnosis of the subject for the tissue remodelling-associated condition.

2. The method of claim 1, wherein the tissue remodelling-associated condition is cancer.

3. The method of claim 1, wherein the tissue remodelling-associated condition is an arthritic condition, an obstructive condition, or a degenerative condition.

4. The method of claim 2, wherein the cancer is organ-confined prostate cancer.

5. The method of claim 2, wherein the cancer is metastatic prostate cancer.

6. The method of claim 2, wherein the cancer is in cells of epithelial origin.

7. The method of claim 6, wherein the cancer is selected from the group consisting of cancers of the nervous system, breast, retina, lung, skin, kidney, liver, pancreas, genito-urinary tract, and gastrointestinal tract.

8. The method of claim 2, wherein the cancer appears in cells of mesodermal origin.

9. The method of claim 2, wherein the cancer appears in cells of endodermal origin.

10. The method of claim 2, wherein the cancer affects cells of bone or of hematopoietic origin.

11. The method of claim 1, wherein the enzyme is involved in a pathway of tissue remodelling or reshaping.

12. The method of claim 1, wherein the enzyme is a matrix-digesting enzyme.

13. The method of claim 1, wherein the enzyme is a protease.

14. The method of claim 13, wherein the protease is a serine protease.

15. The method of claim 13, wherein the protease is a matrix metalloproteinase.

16. The method of claim 1, wherein the enzyme is a proenzyme.

17. The method of claim 1, further comprising removal of low molecular weight contaminants from the urine prior to the detection step.

18. The method of claim 17, wherein the urine is dialyzed.

19. A non-invasive method for facilitating the diagnosis of a subject for a disorder of the prostate, comprising:

obtaining a urine sample from a subject ; and

detecting a prostate disorder-associated enzyme in the urine sample, thereby facilitating the diagnosis of the subject for the prostate disorder.

20. The method of claim 19, wherein the prostate-disorder associated enzyme is a matrix-digesting enzyme.

21. The method of claim 19, wherein the matrix-digesting enzyme is a protease.

22. The method of claim 21, wherein the enzyme is a metalloproteinase.

23. The method of claim 19, wherein the disorder of the prostate is benign prostatic hyperplasia.

24. The method of claim 19, wherein the disorder of the prostate is organ-confined prostate cancer.

25. The method of claim 19, wherein the subject has previously been treated surgically or hormonally.

26. The method of claim 25, wherein the subject has been treated to block testosterone.

27. The method of claim 19, wherein the disorder is metastatic cancer.

28. A method for facilitating the diagnosis of a subject for prostate cancer, comprising:

obtaining a urine sample from a subject suspected of having prostate cancer; and

detecting a prostate cancer-associated enzyme in the urine sample, thereby facilitating the diagnosis of the subject for prostate cancer.

29. The method of claim 28, wherein the prostate cancer-associated enzyme is a protease.

30. The method of claim 29, wherein the protease is a matrix metalloproteinase.

31. The method of claim 30, wherein the matrix metalloproteinase is gelatinase A or gelatinase B.

32. The method of claim 28, wherein the subject has benign prostatic hyperplasia.

33. The method of claim 28, wherein the subject is under treatment to block testosterone.

34. The method of claim 28, further comprising removal of low molecular weight contaminants from the urine prior to the detection step.

35. A method for facilitating the prognosis of prostate cancer in a subject, comprising:

obtaining a biological sample from a subject ; and

detecting a prostate cancer-associated enzyme, thereby facilitating the prognosis of prostate cancer in a subject.

36. The method of claim 35, wherein the biological sample is urine.

37. The method of claim 35, wherein the prostate cancer associated-enzyme is a tissue remodelling-associated enzyme.

38. The method of claim 37, wherein the prostate-cancer associated enzyme is a protease.

39. The method of claim 38, wherein the protease is a type IV collagenase.

40. The method of claim 39, wherein the metalloproteinase has a molecular weight of approximately equal to or greater than 82 kDa or 92 kDa.

41. The method of claim 39, wherein the metalloproteinase has a molecular weight of approximately 72 kDa.

42. The method of claim 35, wherein the subject has benign prostatic hyperplasia.

43. A method for prognosis of problematic prostatic hyperplasia in a subject, comprising:

obtaining a biological sample from a subject; and

detecting a problematic prostatic hyperplasia-associated enzyme in the biological sample, thereby facilitating the prognosis of problematic prostatic hyperplasia in a subject.

44. The method of claim 43, wherein the prostatic hyperplasia-associated enzyme is a metalloproteinase.

45. The method of claim 44, wherein the metalloproteinase has a molecular weight of approximately equal to or greater than 92 kDa.

46. A method for prognosis of metastatic prostate cancer comprising:

obtaining a biological sample from a subject; and

detecting a metastatic prostate cancer-associated enzyme in the biological sample, thereby facilitating the prognosis of metastatic prostate cancer in a subject.

~~47.~~ The method of claim 1, wherein the enzyme has a molecular weight of approximately 72 kDa or approximately ~~92 kDa.~~

48. The method of claim 1, wherein the enzyme has a molecular weight equal to or greater than approximately 150 kDa.

49. The method of claim 43 or 46, further comprising removal of low molecular weight contaminants from the urine prior to the detection step.

50. The method of claim 1, wherein the enzyme is detected electrophoretically.

51. The method of claim 50, wherein the electrophoretic pattern is a zymogram.

52. The method of claim 51, wherein the zymogram substrate is gelatin, casein, fibronectin, vitronectin, plasmin, plasminogen, type IV collagen, or a derivative of type IV collagen.

53. The method of claim 1, wherein the enzyme is detected immunochemically.

54. The method of claim 53, wherein the enzyme is detected by a radio-immune assay.

55. The method of claim 53, wherein the enzyme is detected by an enzyme-linked immunosorbant assay.

56. A kit for facilitating the diagnosis and prognosis of a tissue remodelling-associated condition, comprising:

a container having a reagent for detecting an enzyme in a urine sample; and

instructions for using said reagent for detecting the enzyme for facilitating the diagnosis and prognosis of a tissue remodelling-associated condition.

57. The kit of claim 56, wherein the tissue remodelling-associated condition is cancer.

58. The kit of claim 56, wherein the tissue remodelling-associated condition is an arthritic condition, an obstructive condition, or a degenerative condition.

59. The kit of claim 57, wherein the cancer is organ-confined prostate cancer.

60. The kit of claim 57, wherein the cancer is metastatic prostate cancer.

61. The kit of claim 56, wherein the enzyme is a matrix metalloproteinase.

62. The kit of claim 61, wherein the matrix metalloproteinase is a gelatinase.

63. The kit of claim 56, further comprising an apparatus for separating urine into components for removal of low molecular weight contaminants.

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